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California Mineral Production in 1958

by Henry H. Symons and Fenelon F. Davis

The significant events in mineral production in California during 1958 showed that 1958 was in general a year of declining mineral production. The total value of mineral production in the State was \$1,503,000,000, off 9 percent from the \$1,650,000,000 (revised) figure reported in 1957. These events were reviewed in the January 1959 issue of *Mineral Information Service*.

Despite this temporary setback after 7 years of continuously rising values, the total value remained the third highest in the State's history, falling about midway between the corresponding figures for 1955 and 1956. The industrial mineral group actually registered a 1 percent increase in value compared to 1957. Some important individual commodities in both the industrial mineral and metal groups which reported an increase in production were: cement, gold, gypsum, manganese ore, mercury, sand and gravel, and talc.

A compilation of the details of 1958 mineral production on a countywide basis has now been completed by the California Division of Mines in cooperation with the U.S. Bureau of Mines and is presented on the following pages.

Old Arrastres near Sierra Buttes

by Philip A. Lydon

Following the discovery of gold-bearing quartz veins in the Mother Lode in the early 1850's, a need arose for a simple, low-cost method of milling the ore. Mexican miners introduced the arrastre, and soon there were hundreds of these small mills throughout the Mother Lode country, notably at Nashville in El Dorado County and Carson Hill in Calaveras County. The low capacity of these mills proved dissatisfying, however, and within ten years stamp mills had almost completely replaced the arrastre.

The early types of arrastre consisted of a low stone and dirt wall built around a fairly level circular track of stone. In the center of the circle was a vertical post, and to this was attached the end of a long horizontal beam. The free end of the beam was harnessed to a donkey or mule, which provided motive power by walking in a circle outside the low arrastre wall. A heavy chain was attached to the beam between the wall and center post, and the free end of the chain was linked to a ring bolt that was wedged into a heavy "drag stone".

Ore broken to 3/4-inch size was placed in the circular track and ground to a very fine size as the

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